MOONRAKER

SPIN-TUMBLE RECOVERY

- Great Beginner Rocket
- Flutters Safely to Earth
- Dual Configuration

1 MODEL KIT
Paint and Glue not included.
1 MODÈLE RÉDUIT
Peinture et Colle non comprises.

#081126

Second Configuration

RECOMMENDED ENGINES
½A6-4 A8-5

SPECIFICATIONS

Length	5.5"	(14 cm)
Body Diam.	0.76"	(1.9 cm)
Net Wt.	0.3 oz.	(8.5 g)

Centuri

FLYING MODEL ROCKET KIT

ENGINES NOT INCLUDED

#5041

ASSEMBLED LGTH: 5.5" RECOMMENDED AGE: 10 TO ADULT

Made in U.S.A.

Centuri Engineering Co., Inc.; Phoenix, Arizona 85001

SKILL LEVEL

1	2	3	4	5
Beginner		Intermediate		Advanced

TYPICAL ALTITUDES
Altitudes depend greatly on the quality of assembly and finishing.

Engine	Feet	Engine	Feet
½A	260	A	500

TOOLS YOU WILL NEED:
REQUIRED
White Glue
OPTIONAL
Spray Paint

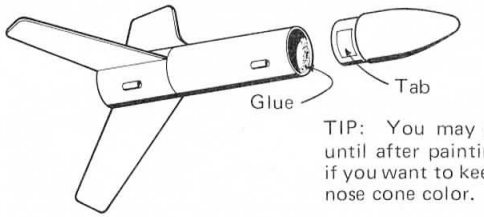
MOONRAKER

Centuri

11 Seal all exposed fibre-fin edges with a thin film of glue for best appearance and strength.

12 Reinforce all fin and luglet glue joints with glue "fillets". Run a bead of glue along each joint and smooth into neat fillets with your finger. Use glue sparingly and wipe away excess. Allow to dry thoroughly before painting, but don't let any fins sag.

13 Peel the backing off the small pressure-sensitive tab and rub the tab onto the nose cone base (the paper tab allows you to glue the plastic nose cone with ordinary white glue or Centuri Superbond). Apply a bead of glue just inside the body tube and insert the cone with a firm, turning motion.

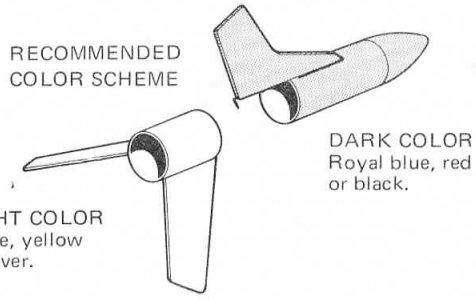


TIP: You may save this step until after painting the rocket if you want to keep the original nose cone color.

NEVER USE "DOPE" ON PLASTIC PARTS:

14 Spray painting your finished model with a fast-drying enamel will produce the best results... IF IT IS DONE PROPERLY!!! Most important is the number of coats of paint. DO NOT try to paint your model with one heavy coat! Instead, give it a couple of quick, light coats first and THEN a finish coat. Let each coat dry before applying the next.

When all glue joints are thoroughly dry, the model is ready to be painted.



ENGINES

Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri Engines.

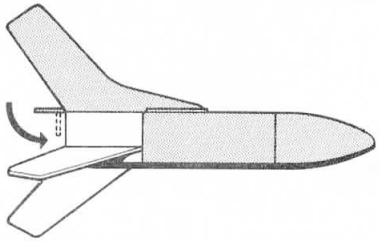
The Moonraker can be launched with the following engines:

ENGINE	APPROXIMATE ALTITUDE	PURPOSE
½A6-4	200-300 feet	LOW ALTITUDE - for first test flights and small launch areas.
A5-4	350-450 feet	MEDIUM ALTITUDES - for general flying and medium size launch areas.
A8-5	400-600 feet	HIGH ALTITUDES - for extremely high flights and large launch areas.

More powerful engines (B4-6, B6-6, C6-7) may be used, but there is little chance of seeing and recovering the tiny Moonraker with those extreme altitudes.

FLIGHT PREPPING

1. Prepare a recommended engine with an igniter.
2. Insert the engine (the lower unit may point either way).
3. Bend the end of the wire retainer across the engine to hold the rocket together. Be sure the wire does not short circuit the igniter wire or the micro-clips.



Carefully prepare and check your rocket before each flight.

Launch the Moonraker from any standard model rocket launcher having a 1/8" diameter x 36" long steel launch rod.

Do not leave the rocket sitting in the sun for long periods as this may soften the adhesives.

Referring to the specific instructions which accompany Centuri launchers and firing panels, mount the rocket on the launcher and prepare for ignition. Avoid eye injury by capping the exposed tip of the launch rod when not actually launching!

Centuri

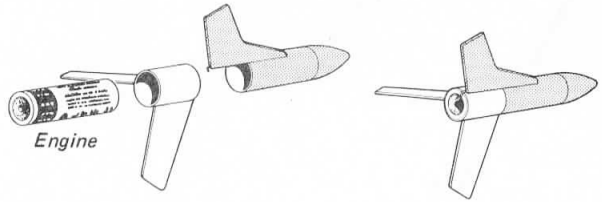
CENTURI ENGINEERING COMPANY
P.O. Box 1988, Phoenix, Arizona 85001

DUAL CONFIGURATION

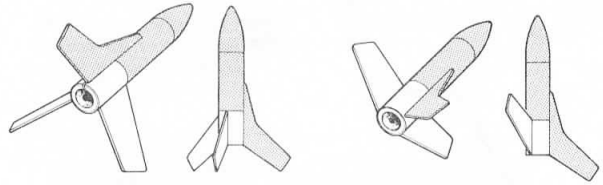
MOONRAKER

THE RIGHT MATERIALS FOR THE JOB:		
PART	**MATERIAL**	**REASON**
Fins	Fibre-Board	• Flight & recovery durability • Fast Assembly
Nose Cone	Molded Styrene	• Durability • Surface integrity
Launch-Luglets	Mylar/Fibre	• Low aerodynamic drag • High strength

The Centuri MOONRAKER is not just the average model rocket! Built as two separate components, the rocket does not hold itself together until you insert an engine.



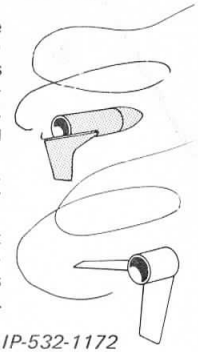
The rear unit may be pointed in either direction when prepared for flight. Both configurations are very stable in upward flight.



"Traditional" Configuration

"Raked" Configuration

When properly built and prepared, the MOONRAKER has an engine (not included) inside, and the retainer wire outside, thus holding the front and rear units together. After rocketing hundreds of feet into the air, the engine's ejection charge ignites, pushing the engine out the rear and releasing the retainer wire. The two units are now separate, and are aerodynamically unstable. They drift gently to earth, spinning rapidly . . . very much like a gyro copter. The light weight expended engine casing tumbles harmlessly to earth also. The MOONRAKER is very durable and will survive countless flights.



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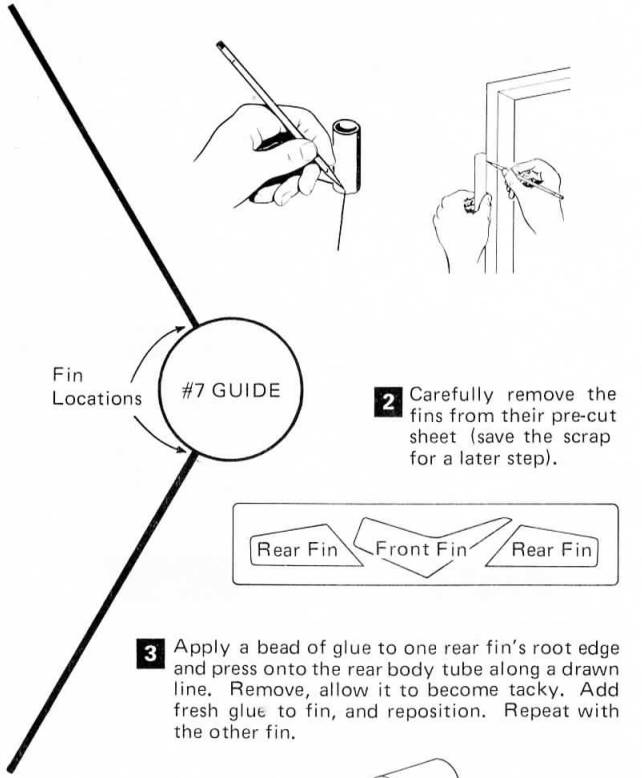
ASSEMBLY INSTRUCTIONS

FOLLOW DIRECTIONS CAREFULLY!

TOOLS: The Moonraker may be easily assembled with the standard model rocket tools shown at right. DO NOT use model airplane glue for building flying model rockets.

The front and rear units are assembled separately.

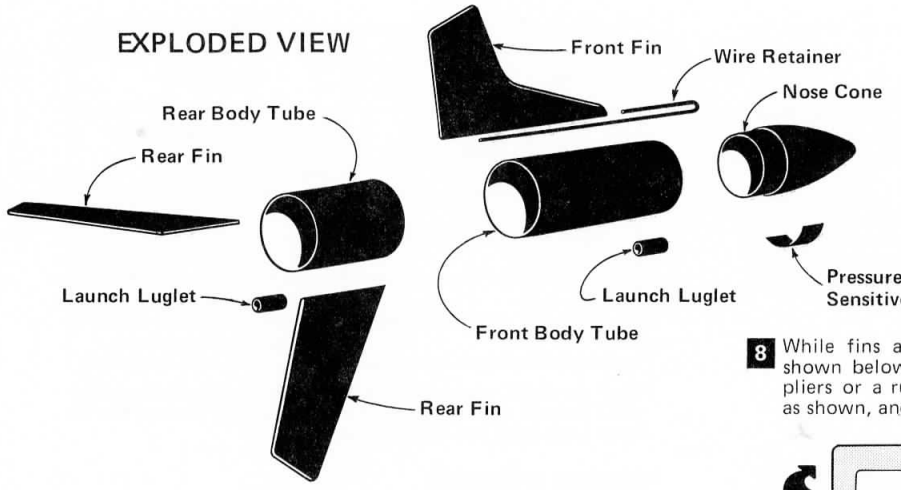
1 Stand the short (1 1/8") body tube on the fin guide to mark fin locations. Find a convenient channel or groove, such as a door jamb, partially open drawer, or molding. Extend the marks the full length of the tube.



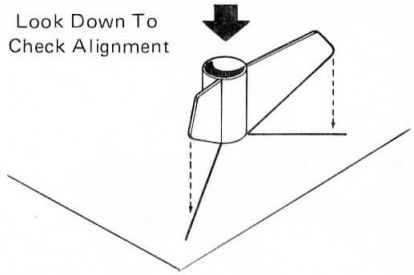
2 Carefully remove the fins from their pre-cut sheet (save the scrap for a later step).

3 Apply a bead of glue to one rear fin's root edge and press onto the rear body tube along a drawn line. Remove, allow it to become tacky. Add fresh glue to fin, and reposition. Repeat with the other fin.

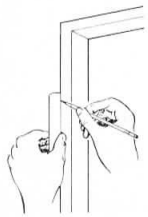
EXPLODED VIEW



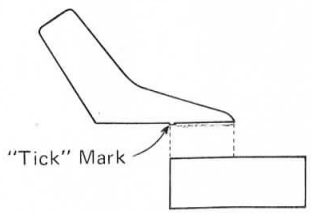
4 Now stand the unit upright on the fin guide back in step 1 to make sure fins are properly aligned. Allow glue to dry before further handling.

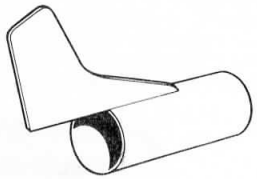


5 Start assembling the front unit by using the "door jamb technique" again, to draw a straight guide line along the longer (2") body tube.

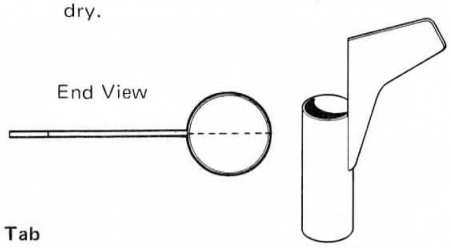


6 Apply a small bead of glue to the root edge of the front fin, only between the "tick" mark and the very tip. Attach fin along the line drawn on the tube . . . the "tick" should exactly touch the end of the tube.

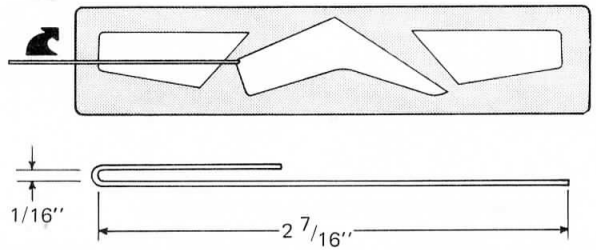




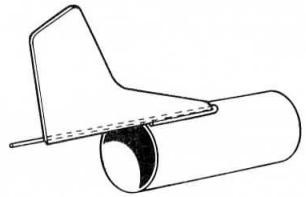
7 Look at the unit from the end, to be sure the fin is neatly lined up with the center of the tube. Stand unit upside down to dry.



8 While fins are drying, bend the retainer wire to the shape shown below. TIP: Here's an easy way to do it without pliers or a ruler. Lay the wire against the fin scrap exactly as shown, and bend the wire around the edge.



9 Lay the formed wire retainer neatly around the base of the upper fin. Run a fine bead of glue over the wire to hold it in place, and wipe extra glue off with your finger.



10 Put the two units together into a flight configuration (If you have a model rocket engine use it to hold the units together). Glue the two small launch luglets in place, making sure they are exactly in line with each other.